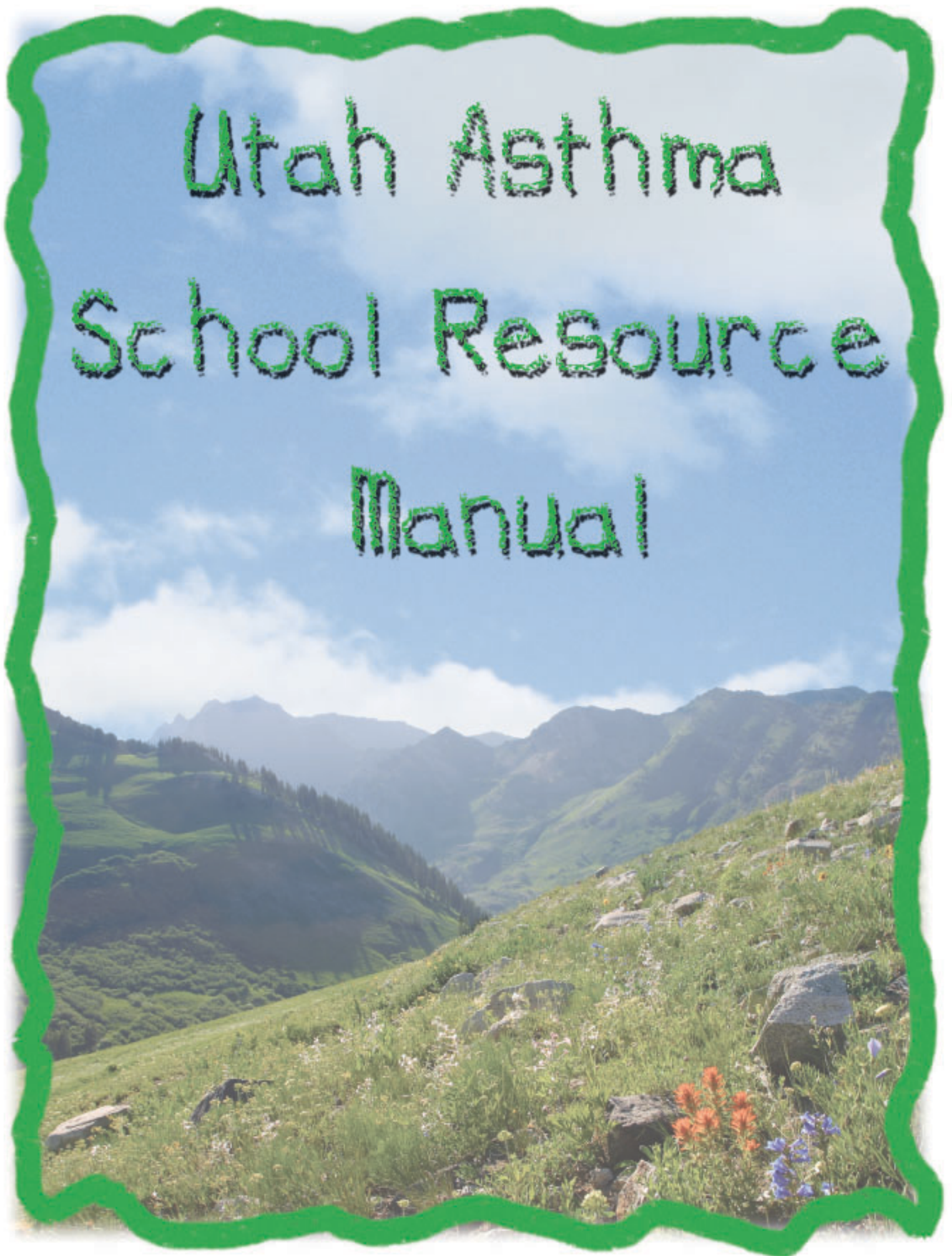
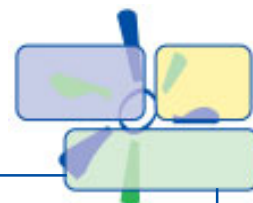


Utah Asthma School Resource Manual



Asthma School Resource Manual

Acknowledgements



The Utah Department of Health Asthma Program would like to acknowledge the many individuals and agencies who gave their time and resources to create this manual. We especially appreciate the State of Connecticut Department of Public Health, Bureau of Community Health for the use of their manual, *Managing Asthma in Connecticut Schools*.

Vicki Berg, RN, CDE

Ashley Valley Medical Center

Kathy Briggs, RN, NCSN

School Nurse
Granite School District

Meg Danielson, RN, BSN

Quality Improvement Specialist
IHC Health Plans

Rebecca Giles, MPH, CHES

Asthma Program Manager
Utah Department of Health

Caroline E. Green, CHES, BSN

State School Nurse Consultant
Utah Department of Health

Sharon Hendrickson, RN

School Nurse
Weber School District

Paula Johnson RN, BSN

Bureau Manager of Public Health Nursing
Davis County Health Department

Libbey Mathews, BS

Health Program Specialist
Asthma Program
Utah Department of Health

Gary Peterson, RN

Asthma Program Coordinator
Primary Children's Medical Center

Virginia J Sanchez, RN

School Nurse
Granite School District

Lee Stoor

Special Education Coordinator
Alpine School District

Lana Sullivan RN, BSN

School Nurse
Davis County Health Department

Becky Toone, RN

School Nurse
Weber School District

Vicki Wheeler

Associate Director
American Lung Association of Utah

Mindy Williams, MPH

Grant Coordinator
Asthma Program
Utah Department of Health

Cherissa Wood

Program Specialist
American Lung Association of Utah

David C. Young, PharmD.

Associate Professor, Clinical
University of Utah College of Pharmacy

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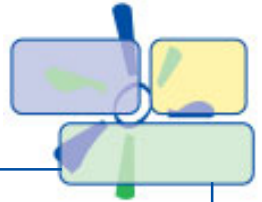


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Foreward

Introduction

This manual has been prepared as a guide for all school staff who are key players in promoting student health and health services in the school. Administrators, secretaries, teachers, nurses, coaches, and custodial staff are part of one team who work together to promote the health of students and staff and to create a healthy school environment. The manual is divided into specific sections for targeted audiences to provide them with the information they need to understand, manage, and control asthma in the school. The information is presented in a simple yet comprehensive manner. Included within the manual are references and resources for further information, as well as handouts that can be reproduced and distributed to colleagues and parents.

Strategies for Addressing Asthma Within a Coordinated School Health Program

The Centers for Disease Control and Prevention *(CDC) has identified six strategies for schools and districts to consider as they develop coordinated plans for addressing asthma in schools.

**CDC is recognized as the lead federal agency for protecting the health and safety of people - at home and abroad, providing credible information to enhance health decisions, and promoting health through strong partnerships.*

The six strategies for addressing asthma within a coordinated school health program are:

- ★ Establish management and support systems for asthma-friendly schools.
- ★ Provide appropriate school health and mental health services for students with asthma.
- ★ Provide asthma education and awareness programs for students and school staff.
- ★ Provide a safe and healthy school environment to reduce asthma triggers.
- ★ Provide safe, enjoyable physical education and activity opportunities for students with asthma.
- ★ Integrate school, family, and community efforts to better manage asthma symptoms and reduce school absences among students with asthma.

(Please refer to the booklet in the pocket, "Strategies for Addressing Asthma Within a Coordinated School Health Program.")

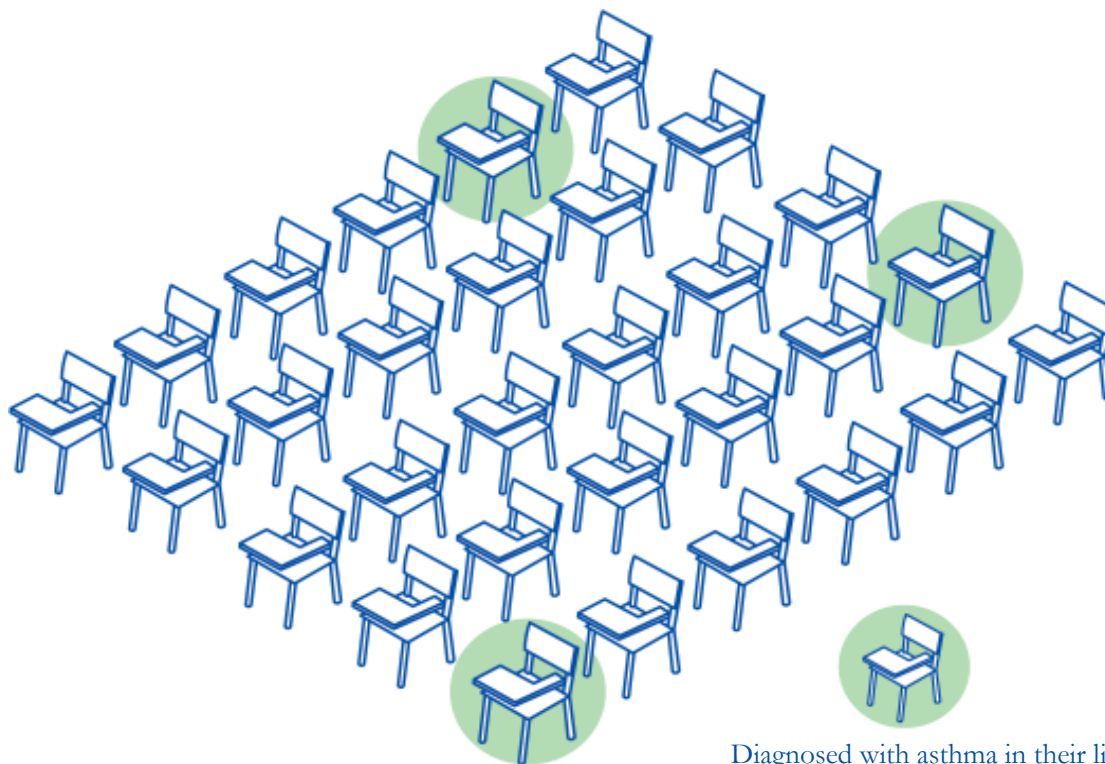
Asthma Basics

Asthma: A chronic inflammatory disease of the lungs.

Asthma Overview

People who have asthma experience periods of breathlessness, wheezing, coughing, and chest tightness; these periods are called attacks or episodes. Sometimes these attacks can be life threatening. The specific cause(s) of asthma are not known. However, people with asthma can lead *normal, productive* lives with effective asthma management and control of asthma

symptoms. Asthma that is not controlled has a significant impact on the person with asthma, the family, caregivers, and others. Asthma is the leading cause of missed days from school due to a chronic illness and can result in missed days of work, visits to the hospital, interrupted sleep, limited physical activity, and the disruption of family and caregiver routines.



Source: *National Health Interview Survey, National Center for Health Statistics, National Center for Disease Control and Prevention, 2001.*

Asthma Basics

Asthma Data:

The incidence, severity, and mortality associated with asthma are increasing.

Overall Utah Data

- ★ About 7.5% of Utahns are under medical care for asthma.
- ★ Utahns spent more than \$8.3 million for asthma hospitalizations in 2002.

Children, Ages 0-17 Data

- ★ Asthma is the most common chronic illness among children.
- ★ Approximately 5.0% of Utah's children under the age of 18 have asthma.
- ★ Childhood asthma is a leading cause of missed school days within the United States.
 - ★ Each year more than 10 million school days are missed.
- ★ Some 2,400 children under the age of 17 were hospitalized in 2002 due to asthma in Utah.

Sources: *Utah Health Status Survey 2001; Utah Hospital Discharge Database 2002; Utah Emergency Department Encounter Database, 2002*

Asthma Signs and Symptoms

As staff members, it is important to understand how to recognize asthma warning signs and to educate students with asthma about the early signs of an asthma episode so that the student can take the appropriate medication to keep his/her asthma under control.

What to Look For:

- ★ Retractions
- ★ Nasal flaring
- ★ Depressed sternal notch
- ★ Nausea/vomiting
- ★ Fatigue
- ★ Decreased peak flow value
- ★ **More serious symptoms include:**
 - ★ Dyspnea (shortness of breath)
 - ★ Diaphoresis (perspiration)
 - ★ Unwillingness/inability to speak or lie down
 - ★ Anxious look
 - ★ Stooped body posture

Other Signs and Symptoms:

- ★ Cough or wheeze after physical activity.
- ★ Breathing problem during particular season.
- ★ Cough, wheeze, or chest tightness after exposure to allergens.
- ★ Colds that last more than 10 days.
- ★ Symptoms not relieved when rescue medication is used.

What to listen for:

- ★ Complaints of chest tightness or pain
- ★ Irregular breathing
- ★ Prolonged expiration
- ★ Rapid heart rate
- ★ Grunting
- ★ Abnormal breath sounds:
 - ★ Wheezing
 - ★ Decreased or absent breath
 - ★ Rhonci

Asthma Basics



Common Triggers

The factors that make asthma worse or cause an asthma episode.

Exercise

- ★ running or playing hard-especially in cold weather

Upper respiratory infections

- ★ colds or flu

Laughing or crying hard

Allergens

- ★ Pollens from trees, plants and grasses, including freshly cut grass
- ★ Animal dander-from pets with fur or feathers
- ★ Dust and dust mites-in carpeting, pillows and upholstery
- ★ Cockroach droppings
- ★ Molds

Irritants

- ★ Cold air
- ★ Strong smells and chemical sprays, including perfumes, paint and cleaning solutions, chalk dust, lawn and turf treatments
- ★ Weather changes
- ★ Cigarette and other tobacco smoke

What to do in the event of an asthma attack at school:

(Refer to the laminated "General Emergency Protocol" for a quick reference.)

- ★ Reassure student and attempt to keep him/her calm and breathing slowly and deeply. Review the student's Asthma Action Plan, current medications, and emergency medications.

- ★ Have student sit upright and check breathing with peak flow meter, if appropriate.

- ★ Administer prescribed medication as directed.

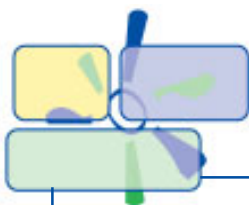
- ★ Student should respond to treatment within 15 to 20 minutes. Re-check with peak flow meter.

- ★ If NO change or breathing becomes significantly worse, call for emergency help and contact parent or guardian immediately.

- ★ Seek immediate emergency care if student exhibits any of the following:

- ★ Coughs constantly.
- ★ Is unable to speak in complete sentences without taking a breath.
- ★ Has lips, nails, mucous membranes that are gray or blue.
- ★ Demonstrates severe retractions and/or nasal flaring.
- ★ Is vomiting persistently.
- ★ Has 50% reduction in his/her personal best peak flow reading and shows no improvement after 15 to 20 minutes.
- ★ Has pulse greater than 120 beats per minute.
- ★ Has respiration greater than 30 breaths per minute.

Source: *Asthma and Allergy Foundation of America*



Asthma Basics

Interpreting Peak Flow Rates

Peak flow meter recordings need to be interpreted carefully, and they should be done in the presence of an adult because they are effort-dependent. In most children with asthma, peak flow readings are an accurate and reliable measure of resistance to pulmonary airflow. However, in very young children, children with severe asthma, and in children with small airway obstruction, the data becomes more difficult to interpret.

The Asthma Action Plan uses asthma symptoms and/or personal best peak flow rates to determine the zone the student falls under to effectively manage his/her asthma. The following list can be used as a guide in understanding the characteristics of the different levels of peak flow rates.

These zones are guidelines only. Specific zones and management should be individualized for each child.

Source: American Lung Association(1997).
Facts about . . . Peak Flow Meters.

Green = 80% to 100% of personal best

Signals all clear. Asthma is under reasonably good control. No symptoms are present, and the routine treatment plan for maintenance control can be followed

Yellow = 50% to 79% of personal best

Signals caution. Asthma is not well controlled. An acute exacerbation may be present. Maintenance therapy may need to be increased. Call the practitioner if the child stays in this zone.

Red = below 50% of personal best

Signals a medical alert. Severe airway narrowing may be occurring. A short acting bronchodilator should be administered. Notify the practitioner if the peak expiratory flow rate (PEFR) does not return immediately and stay in yellow or green zones. Contact the child's parents immediately and send for medical attention.

Asthma Basics

Frequently Asked Questions about Asthma

Q: I think that having animals in my classroom is important for students. What if I just don't allow the student with asthma to handle the animals?

A: The allergen associated with animals is the dander (e.g., oils, skin, droppings that settle on its fur). That dander can become airborne, settling on furniture and students. It can affect a student even if the student isn't actually handling the animal. Prohibiting certain students from handling the animals singles them out. Consider reptiles as a good alternative to furry or hairy animals.

Remember that animal dander in the environment can persist for months after the animal is gone and is difficult to remove.

Q: I worry that students may use their asthma as an excuse to get out of activities in school such as tests, physical education class, etc. How do I remain firm in my expectations without jeopardizing the student's health?

A: Students should be given the benefit of the doubt until a pattern of avoidance behavior emerges. In that case, the school nurse and parent should be involved in discussion with the teacher about the teacher's

concerns. A peak flow meter may be used to help decide whether or not a student should be excused from an activity. At no time should a student be encouraged to "tough it out" instead of taking a needed quick-relief medication.

Q: I worry that students may share their medications with other students who may want a "buzz" from the inhaler.

A: When students are allowed to carry their own medications, they and their parents need to understand that this is a privilege that could be taken away. Making students aware that they may be putting other students in physical danger if they share their medication may help avoid this problem.

Q: What should I do when a student who has exercise-induced asthma comes to the office for an inhaler before physical education, but the student's peak flow reading is in the "green zone?" Should I administer the medication anyway?

A: Yes! The quick relief medication given before exercise will prevent the student from having problems during physical education, which may trigger the airways to constrict.

Source: *Asthma Management in School Education*, American Lung Association of Washington

Asthma Basics

The Asthma Action Plan

The Asthma Action Plan is an individualized management plan. The primary care provider assists the student and family in developing a management plan. This information is helpful for the school nurse to develop a care plan for use at school. The plan should outline the medical management for asthma, including:

- ★ Instructions for decision making during an exacerbation or attack;
- ★ Medications and how to adjust for increasing severity of symptoms;
- ★ Symptoms and peak flow zones, if appropriate, that predict a flare up, and;
- ★ A list of triggers to avoid at home and in school.

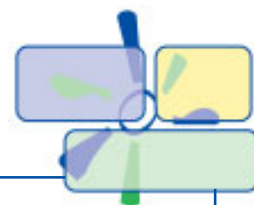
This plan is very beneficial for the staff because it provides comprehensive information needed for intervention and education of students and supports consistent communication with the family and primary care provider.

Throughout the school year, nurses can also help support ongoing communication with parents, guardians, primary care providers, and school personnel. The Asthma Action Plan (*located in the pocket*) provides an example of how this can be done by facilitating direct communication between the school

nurse and the student's health care provider through the use of the medical release form. This collaborative approach to communication helps ensure that students with asthma receive the appropriate care and treatment while enjoying their school experience.

Other information Schools need to know About Asthma

- ★ There is no known cure for asthma, but there are ways to control asthma. If asthma is not controlled properly, and if it is not taken seriously, one can die of asthma.
- ★ Children from low-income families or who are from minority populations are more likely to have asthma and to have higher emergency room and hospitalization rates for their asthma.
- ★ It is important to consult the school nurse to know which students have Asthma Action Plans, covering asthma management and the prevention of asthma attacks.



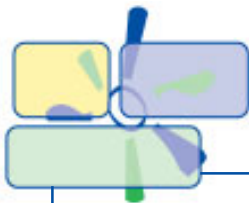
Asthma Basics

Use words that can be clearly understood, without too much medical or asthma jargon.

It is best to say:	Instead of saying:
People with asthma	Asthmatics
Things that start attacks	Triggers
Asthma clues	Signs of asthma, early warning signs
Handling or controlling asthma	Managing asthma
Breathing meter, your meter	Peak flow monitoring
How medicines make you feel	Side effects
How much to take	Dose
How much medicine each person can take	Tolerate medicine
Wet stuff you cough up	Mucous
Breathing machine	Nebulizer
Things you are allergic to	Allergen
Bothers you	Irritate (physically)
Upsets you	Irritate (emotionally)
Swollen	Inflammation
Medicines that open the airways fast	Bronchodilator

These common words may mean something different to children.

It is best to say:	Instead of saying:
Stay away from	Avoid (may mean “ignore”)
Sick or have a cold	Have an infection
Running, playing and sport	Exercise (this may mean calisthenics)
Making choices	Decision-making
Join in	Participate
All the time	Always
Let it dry on a towel	Let it air dry (without using a fan)



Asthma Basics

Be careful to avoid words or expressions that make assumptions about a child's living situation that makes him/her feel left out.

It is best to say:

Instead of saying:

At home

At your house

People in your family

Your caretakers, mother, father

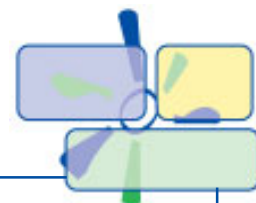
The doctor or nurse

Your doctor

The room where you sleep

Your bedroom

Source: *A Guide for Helping Children with Asthma. National Cooperative Inner City Asthma Study (NCICAS)*



School Administrators

School Administration

Administrators are vital to ensuring that students and staff with asthma receive the support they need. By assuring that the school has established asthma policies, and that parents, students, and staff know and understand the policies, administrators can demonstrate their dedication to the health of their staff and students. In addition, by creating a healthy school environment, student achievement and educational outcomes can improve. *(Refer to the pocket for a copy of “Strategies for Addressing Asthma Within a Coordinated School Health Program.”)*

The following are key roles for administrators to follow to ensure that their school is “**asthma-friendly**.”

Establish and support a school asthma policy

Work with the school board and school nurse to establish policies, which support students with asthma and staff. In May of 2004, a new “Use of Asthma Medication by Pupils in School,” SB 32 went into effect. It is suggested that school districts ensure that their policies correlate with the new bill.

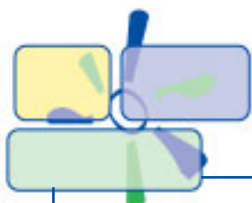
Promote a healthy work/school environment

Make sure that the school buildings and grounds are smoke-free. Prohibit any environmental tobacco smoke on school grounds, or at any school-related activities, such as sporting events, field trips, or dances. Environmental tobacco smoke is a common trigger of asthma. By taking a simple step, like promoting a smoke-free campus, administrators help to minimize asthma triggers and protect students. *For more information about Utah’s Indoor Clean Air Act, visit www.tobaccofreeutah.org.*

Ensure that the school is maintaining good indoor air quality (IAQ)

Government research demonstrates that many schools have problems with poor air quality. Work with school staff, including custodians, to implement the EPA’s *Tools for Schools* Program. This program is designed to provide schools with the resources they need to manage air quality both effectively and inexpensively.

(Please refer to the website for additional information www.health.utah.gov/asthma).



School Administrators

Implement Integrated Pest Management (IPM) to reduce pests and toxic pesticides in the schools

IPM is based on preventing pests by decreasing the resources they need to survive. When pests become a problem, alternatives to pesticides are used to reduce the pest population. Administrators should collaborate with custodial staff to ensure that IPM is effectively implemented in the school. *(Refer to the pocket for an additional handout about IPM.)*

Support staff and students with asthma

Support asthma education programs for students and staff that can be provided by the school nurse. Administrators should make sure that all school staff, including teachers, counselors, custodians, bus drivers, and coaches, are educated about asthma signs and symptoms and asthma management. It is also important to educate all students about asthma, so that students without asthma are aware of the condition and how to help fellow students with asthma. Administrators can also help by supporting a healthy environment and advocating for students with asthma through the American Lung Association's "Open Airways" program. *(Refer to the pocket for additional program and contact information.)*

Ensure that the school is providing appropriate school health services

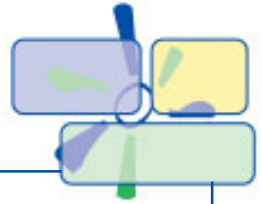
Ensure school nurses are involved in policy development related to medication administration and asthma policies. It is also important to make sure that there are school staff trained for emergency situations when the school nurse is unavailable. Administrators should make sure that there is a plan in place to ensure that students with asthma have immediate access to medications, if necessary, as prescribed by their health care provider.

Encourage use of an Asthma Action Plan for all students with asthma

The Asthma Action Plan is an individualized management plan developed by the school nurse with the student's family and health care provider. This plan supports communication among the school staff, parents, and the health care provider. *(Refer to the pocket for a sample Asthma Action Plan or download it at health.utah.gov/asthma.)*

Promote collaboration with parents, community, and the PTO/PTA

Support the involvement of parents, community health care providers, and local asthma programs in asthma-related activities at school. Encourage the PTO/PTA to sponsor asthma-related information sessions, or training for parents. (i.e. American Lung Association's Open Airways Program).



School Administrators

Ensure that students are provided with opportunities for appropriate daily physical activity

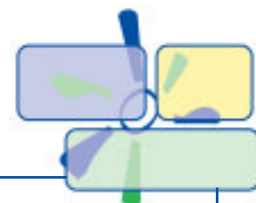
Establish policies and procedures that promote participation in physical activity for all students with asthma. This should include access to asthma medications before physical activity. In addition, all coaches, teachers and physical education teachers should be encouraged to communicate activity limitations to the school nurse and/or parents, as this may be an indication of poorly controlled asthma. It is also important to ask the school nurse for information about students with asthma in their classes.

Use the “How Asthma-Friendly is Your School?” form.

This form is used to assess how prepared your school is to offer a supportive environment for students with asthma. (Refer to the pocket for a “How Asthma-Friendly is Your School” assessment sheet.)

Tips for Administrators

- ★ Evaluate your school’s policies, procedures, and activities related to asthma.
- ★ Collaborate with school nurses to develop these policies.
- ★ Prioritize areas of weakness and establish an action plan to address those needs. (i.e. Identify who has asthma.)
- ★ Develop an Indoor Air Quality (IAQ) management team using a program like the Environmental Protection Agency’s (EPA) IAQ *Tools for Schools* to evaluate the needs and issues in the school.
- ★ Support and encourage education of staff and students about asthma and its signs and symptoms.
- ★ Be aware of where the Health Care Plans are kept in the school.



School Nurses

School Nurse's Role

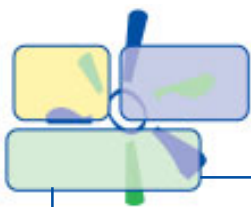
The school nurse plays an integral part in the health and wellness of school children, particularly with regard to chronic conditions such as asthma. In the school setting, students with asthma experience different levels of severity ranging from mild to severe as well as different levels of management and control. Therefore, it is important for the school nurse to have updated and accurate health records on students in order to effectively manage a student's asthma. The Asthma Action Plan can assist with this directly. (*Refer to the pocket for a sample Asthma Action Plan form or download one at health.utah.gov/asthma.*)

The following are some major roles for the school nurse in properly managing students with asthma in the school setting:

- ★ Assist students with asthma in managing their condition in school through an Asthma Action Plan that includes medication administration plans and promotes self-administration when appropriate.
- ★ Be alert to students who are not diagnosed with asthma, but exhibit the signs and symptoms. Refer them to their primary care

provider for further evaluation.

- ★ Obtain authorization from parents to communicate with the medical provider through the use of a medical release form, if appropriate.
- ★ Provide care coordination for students with asthma. If there are signs of exacerbation or evidence of inadequate control, communicate with parents and refer the student to his/her primary care provider. Encourage direct communication with the student's primary care provider, when needed.
- ★ Foster effective communication among community based clinics, individual practitioners, and emergency room staff.
- ★ Train staff on the administration of asthma medication to students.
- ★ Work collaboratively with the school district medical advisor to plan school health programs on asthma.
- ★ Consult with planning and placement teams as needed when medical problems, such as asthma, interfere with education.
- ★ Provide asthma education to students, families, and staff.



School Nurses

School nurses also play a key role in identifying students who do not have a primary care provider and/or health insurance. Nurses can encourage parents to use the school-based health center and to apply for CHIP (Children's Health Insurance Program) or Medicaid. It is important to ensure good communication, particularly in a health emergency, with all care providers.

*Please refer to the resources section for CHIP and Medicaid contact information.

Managing Asthma

Management of asthma involves several approaches, including prevention of asthma attacks, by minimizing contact with triggers, education, good communication, and use of medications.

What medications are used in the management of asthma? Asthma medications belong to two broad categories based on whether they provide **quick relief ("rescue")** or **long-term control ("controller")** of asthma symptoms. Generally, quick relief or rescue medications (bronchodilators) open the airways by relaxing the muscles around the bronchial tubes. Bronchodilators are taken when symptoms begin to occur or when they are likely to occur (e.g., physical education classes or sports

events). Long-term control medications (anti-inflammatory) reduce inflammation of the airways. Typically, anti-inflammatory drugs are taken on a regular basis, usually once or twice daily, even in the absence of symptoms.

(Refer to the pocket for a list of Common Asthma Medications).

Whose responsibility is it to determine whether or not a student can self administer his/her medications? It is the responsibility of the student, the parent/guardian, and the primary care provider to determine whether a student is capable of independently administering medications.

Under the *Use of Asthma Medication by Pupils in School* bill (effective May 3, 2004), the student's primary care provider must complete an Authorization for Self-Administration of Medication at School form, in order for a student to be permitted to carry an inhaler and self-administer the medication. The form must also be signed by the parent/guardian. If a student is responsible for self-administering his/her own medications, the student will have possession of the medication, and he/she may take the inhaler as needed, whether it be on routine basis or for acute asthma attacks. *(Refer to the pocket for an approved Self-administration Authorization form and fact sheet.)*



School Nurses

Social/Emotional Aspects

As a part of routine asthma education and management, the school nurse should assess the social and emotional growth of students with asthma, and promote self-esteem in an effort to make students with asthma feel comfortable with their illness. The nurse can try to minimize feelings of insecurity regarding asthma and help students fit in with the rest of their peers by doing the following:

- ★ Assess social/emotional growth related to student's asthma and self-care:
- ★ Is the student feeling that he/she is different from other students?
- ★ Is the student avoiding taking medication; toughing it out during an attack?
- ★ Is the student notifying school personnel about medication needs and/or use of self-administering?
- ★ Is the student sharing medications with other students?
- ★ Is the student avoiding physical activity out of fear of asthma symptoms rather than actual occurrence of symptoms?

Promote self-esteem

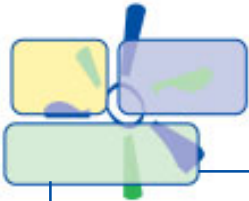
- ★ Assist student in providing information about asthma care to others.
- ★ Provide positive feedback for good decisions.
- ★ Increase independence in plan of care.

Source: *Asthma Management in Education Setting*,
American Lung Association of Washington

Tips for the School Nurse

(Remember to always keep the confidentiality of the student and their family in mind.)

- ★ Make staff aware of students with allergies and asthma.
- ★ Give each teacher a list of Health Care Plans to read and sign.
- ★ Have a telephone conversation or meeting with parents, guardians, and students regarding asthma management and treatment for the student.
- ★ Have a completed copy of a student's Asthma Action Plan on record and share information with school staff when necessary.
- ★ Tell appropriate school staff members about students with a history of asthma, when necessary, to ensure student safety.



School Nurses

- ★ Work closely with school staff and offer assistance in integrating asthma into curricula, including health, science, and physical education. It is also very beneficial to provide educational opportunities for the staff.
- ★ Serve as a resource for school staff and families by having asthma information readily available.
- ★ Collaborate with the parent/teacher organizations at school to provide asthma education programs for families and community. (i.e. Open Airways, *Please refer to the pocket for additional information.*)
- ★ Identify and keep a confidential list of students who are in need of additional attention based on the severity of their asthma and/or excess absences.

School Nurses

School Nurse Checklist

Planning for Care as School Begins

The following checklist is recommended for all students identified with asthma. School nurses may also need to be alert to students who have symptoms of asthma and have not yet been identified. This may include students who are coughing a lot, having trouble with physical activity, or visiting the school nurse office regularly.

- ★ Send an asthma questionnaire home for parents to provide additional information about the student's asthma.
- ★ Call or meet with the student and family.
- ★ Discuss parent/student expectations of asthma care while at school.
- ★ Obtain Asthma Action Plans for each student with asthma, including students who self-administer medications.
- ★ Determine equipment and supplies needed for school, including a 3-day disaster supply.
- ★ Discuss plans for communication with parents and health care provider.

- ★ Discuss role of health services with personnel involved.
- ★ Communicate with necessary school staff about students with asthma. For example, discuss any pet allergies with the school teacher, food allergies with teachers and nutrition staff/food service, and the need to warm up before physical activity with physical education teachers and coaches.

Source: *Asthma Management in School Education*,
American Lung Association of Washington

All School Staff

It is important for school staff to be aware of things that may impact a student with asthma. This includes understanding activities or conditions that may cause an asthma attack and recognizing early signs of an asthma episode.

Due to the limited numbers of public school nurses employed in Utah (approximately 120 school nurses), not every school has a full-time school nurse. Therefore, nurses schedule brief on-going visits to their assigned schools and are available via cell phone or pager when their medical expertise is needed. Since school nurses are not present in school every day, it is important that ALL staff members understand how to recognize asthma warning signs, and help educate students with asthma about the early signs of an asthma episode.

Asthma is a big concern to school administrators, parents, and teachers because it is the leading cause of school absenteeism due to a chronic illness. In Utah, more than 36,000 children have been diagnosed with asthma. (Refer back to the *Asthma Basics* section for additional asthma data.) Students with asthma may have trouble keeping up-to-date with assignments because of missed days of school and classroom time. Therefore, it is important for staff to:

- ★ Be sensitive to the needs of any student with asthma;
- ★ Understand what causes asthma attacks and how to minimize them;
- ★ Understand early warning signs, and;
- ★ Be educated on medication administration.

While there is no cure for asthma, it can be controlled by understanding asthma, triggers for asthma attacks, and how to successfully minimize environmental exposures. It is important to be aware of the early warning signs, and what to do in case of an attack. After attending an inservice about asthma, refer to your school nurse and/or The Asthma School Resource Manual for additional information and skills.

Asthma attacks can occur anywhere in the classroom, on the playground or sports fields, on school buses, or during field trips. This is why it is essential for all staff to be educated about asthma. It is not a role solely for the school nurse. In the case where a school nurse is unavailable, **other staff** may need to take responsibility for helping a student with asthma.

All School Staff

Asthma is a physical condition

Asthma is a real, chronic disease of the lungs; it is not something made up or imagined. Just like any chronic disease, students with asthma may have difficulty coping with their disease. They may feel left out or “different” from their peers, particularly when they are unable to participate in physical activities with the rest of their classmates. If a student is unable to participate, he/she should be assessed by the school nurse because he/she may not be on the correct treatment. The school nurse should communicate with the student’s parents and primary care provider to advocate for a change in treatment. *Students on an appropriate treatment plan should be able to tolerate the same activities as other students.*

Students with asthma may have trouble keeping up with school-work because of days missed from school due to their asthma. Teachers may notice low self-esteem, withdrawal from activities, stress, and/or discouragement over managing asthma. In these cases, teachers should seek assistance from the school guidance counselor and school nurse, so that the child can get individualized counseling to deal with those issues.

Recognize that asthma is a health condition, and try to be understanding if a student says that he/she is unable to participate in class or tests, etc. Do not assume that the student is just trying to get out of activities in school. However, if a pattern emerges where a student is constantly avoiding exams and/or other activities, a discussion with the school nurse and parent(s) should take place.

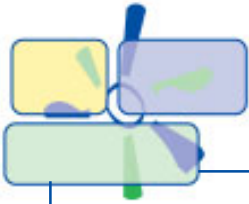
Teaching Staff

Since students spend a majority of their school day in the classroom, it is helpful for teachers to understand asthma and how to support any students with this disease. In addition to recognizing the early warning signs of an asthma attack and understanding how to reduce asthma triggers in the classroom, there are certain steps teachers can take to help students feel more comfortable about their asthma when at school.

- ★ Encourage students with asthma to participate in all activities, including physical education;
- ★ Develop a protocol for making up missed school-work with parents and students with asthma;
- ★ Check to see which students have Health Care Plans;
- ★ Educate other students in the classroom about asthma.

Unlike other school staff, teachers have a special relationship with their students in that they spend more time with them during the day and may know more about them. Therefore, they have the opportunity to notice any emotional and/or physical changes in students. Teachers can assess the social and emotional growth of students with asthma and help to promote their self-esteem. Teachers can also help minimize any feelings of insecurity regarding their asthma and help students fit in with the rest of their peers by evaluating the following questions:

- ★ Is the student feeling that he/she is different from other students?
- ★ Is the student avoiding taking medications; toughing it out during an attack?
- ★ Is the student reluctant to go to the office for medications?
- ★ Is the student notifying school personnel about medication needs and/or use if self-administering?
- ★ Is the student sharing medications with other students?
- ★ Is the student avoiding physical activity out of fear of anticipated asthma symptoms rather than the actual occurrence of asthma symptoms?

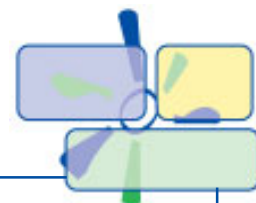


Teaching Staff

Field Trips

When planning a field trip for the classroom, teachers should consult with the school nurse and parents about the location and general environment to be visited. Sites such as zoos, smoky areas, nature areas, and botanical gardens may trigger asthma. Make sure that the student's medications, peak flow meter (if prescribed) and Asthma Action Plan are brought with the student on the field trip.

Source: *Asthma Management in Education Setting*,
American Lung Association of Washington



Teaching Staff

Preparing for asthma in the classroom

Teaching equipment

- ★ Clean chalkboards when students are not in the classroom and clean erasers outside.
- ★ Paints and markers often have strong fumes. Replace tops when not in use or use unscented markers.
- ★ Stuffed animals and toys should be made of synthetic material. Store in plastic bags or wash several times a year. Keep plastic storage bags away from students when not in use.
- ★ Use animals with no fur in the classroom, such as fish or snakes. The allergen particle from pets with fur is smaller than the dust particle and remains in the air for a longer period of time.

Furniture

- ★ Bookshelves trap dust easily. Dust weekly when the students are not in the classroom.
- ★ Lamps should have plain shades rather than pleated shades that can trap more dust.

Windows

- ★ Check pollen count before opening windows for “a little fresh air.”

Teachers and Staff

- ★ Avoid perfumes, scented talcum powder, and hair sprays.
- ★ Smokers need to know that the smoke they bring from the smoking area lingers in their hair and on their clothes.
- ★ Avoid over watering plants, which may contribute to mold growth.

Classroom cleaning supplies

- ★ If you have cleaning materials (chemicals) in the classroom be sure there are danger stickers on them, as many children can not read yet. Some cleaning products have strong fumes. Replace caps quickly and use when the students are not in the classroom, whenever possible.
- ★ Avoid using aerosol sprays with students around.
- ★ Use natural cleaning agents.
- ★ White or apple cider vinegar removes mold, mineral deposits, and crayon marks.
- ★ Baking soda is a good general cleaner that can also be used as a room rug deodorizer or refrigerator deodorizer.
- ★ Club soda is a good spot remover.

Teaching Staff

- ★ Clorox bleach solution is a viricide, mold remover, and cleaning agent.
- ★ Use liquid rather than bar soap (mild or unscented) for hand washing.

Source: *Chicago Public School*

Tips for Staff

- ★ Know the early warning signs of an asthma episode.
- ★ Get information on managing asthma in the classroom from the school nurse and understand the steps to take in case of an asthma episode.
- ★ Develop a clear procedure with the student and parent for handling schoolwork missed due to asthma.
- ★ Understand that a student with asthma may feel:
 - ★ Drowsy or tired;
 - ★ Different from the other kids;
 - ★ Anxious about access to medication;
 - ★ Embarrassed and/or withdrawn about the disruption to school activities that an asthma episode causes.
- ★ Help students feel more comfortable by recognizing these feelings. Try to maintain confidentiality.

Educate classmates about asthma so they can be more understanding.

- ★ Know the possible side effects of asthma medications and how they may impact the student's performance in the classroom. Refer any problem to the school nurse and parent(s). Common side effects of medicine that warrant referral are: nervousness, nausea, jitteriness, hyperactivity, and drowsiness.
- ★ Reduce known allergens in the classroom to help students with allergies. Common allergens in the classroom include: chalk dust, animals, and strong odors (perfumes, paints).
- ★ Encourage the student with asthma to participate fully in physical activities.
- ★ Allow a student to engage in quiet activity if recovering from an acute episode.

Source: *Managing Asthma: A Guide for Schools*, National Heart, Lung, and Blood Institute (NHLBI), National Institutes of Health, US Department of Health and Human Services and the Fund for the Improvement and Reform of Schools and Teaching, Office of Educational Research and Improvement (OERI), US Department of Education, September 1991. NIH Publication No. 912650



Physical Education Teachers

Coaches, physical education teachers, and/or athletic directors need to learn about asthma and be sensitive to the needs of any student with asthma. This includes:

- ★ Understanding what causes asthma attacks and how to minimize them;
- ★ Understanding early warning signs;
- ★ Access to and awareness of a student's Asthma Action Plan;
- ★ Education on medication administration;
- ★ Access to medication in case of an asthma attack.

Students with asthma should be included in physical activities as much as possible. If not, they may risk experiencing being left out or isolated, which can result in low self-esteem, lack of motivation to participate in activities, or teasing by classmates. Staff and students should be encouraged to help students with asthma participate in activities to help reduce any stigma.

To assist students with asthma and increase participation in physical activities, modifications to type, length, and/or frequency of activity may be necessary. Modifications are particularly important if a student has just experienced an attack or if he/she asks to be excused from physical activities.

Exercise-Induced Asthma

Regular exercise is a major contributor to healthy lifestyles for all ages. However, exercise is a common trigger for asthma and this should be recognized and understood by school staff.

Children with asthma can, and should, participate in physical activity as much as possible.

Exercise-induced asthma (EIA) occurs when physical activity causes a narrowing of the bronchial tubes called bronchoconstriction.

Bronchoconstriction can cause wheezing, coughing, chest tightness, and/or shortness of breath both during and after exercise. Other symptoms can include fatigue or chest congestion. Some say that EIA feels like being “out of shape.” Not all people with asthma experience symptoms of EIA when they exercise. However, 80% to 90% of people who have asthma also have EIA. Furthermore, one can have EIA without having chronic asthma.

The severity of EIA often correlates with the type and intensity of the exercise and the environment in which it is performed. For example, people with EIA are more likely to experience symptoms when running; they are less likely to experience symptoms when cycling or swimming. Asthma varies from

Physical Education Teachers

student to student, therefore, it is important for school staff to understand individualized needs of their students. A student's Asthma Action Plan may include individualized guidelines on physical activity. Physical education teachers, coaches, and athletic directors should have easy access to this information from the school nurse. If a student experiences frequent asthma symptoms while exercising, this may suggest that his/her asthma is not well managed. This is important information to communicate with the school nurse.

Five Ways to a Wheeze-Free Workout

- ★ Warm up early
- ★ Drink lots of fluids
- ★ Go nasal - breathe through the nose
- ★ Avoid high noon
- ★ Wear a mask

Activities Less Likely to Cause Exercise-Induced Asthma:

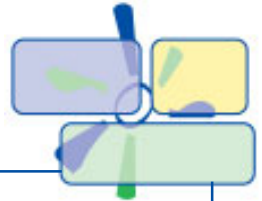
- ★ Baseball
- ★ Swimming
- ★ Football
- ★ Tennis
- ★ Golf
- ★ Weightlifting

Athletes With Asthma

Asthma hasn't stopped these athletes from performing at their best:

- ★ Jerome Bettis, Running Back, Pittsburgh Steelers
- ★ Tom Dolan, Olympic Medalist, swimming
- ★ Amy Van Dyken, Olympic Medalist, swimming
- ★ Jackie Joyner-Kersey, Olympic Gold Medalist in Track and Field
- ★ Art Monk, NFL Receiver
- ★ Gregg Louganis, Olympic Gold Medalist in Diving
- ★ Isaiah Thomas, Basketball player
- ★ Dominique Wilkins, Basketball player

Source: Asthma Magazine, May/June 2001
Volume 6, Number 2, Mosby Inc., *Management of Exercise-Induced Asthma: Helpful Hints for Sports Coaches*, from the website:
www.asthmaaustralia.org.au/brochures/exercise.htm



Physical Education Teachers

Tips for Coaches, Physical Education Teachers, and Athletic Directors

- ★ Make sure to know who has asthma in the class or on the team.
- ★ Make sure that students with a physician's order to take medication (bronchodilator) prior to exercise, do so, and have access to their medications at practice and games. Be aware that after taking medications, students may feel jittery or nervous, and have an increased activity level.
- ★ Include adequate warm-up and cool-down periods. These help prevent or lessen episodes of exercise-induced asthma.
- ★ Remember that a student who experiences symptoms or who has just recovered from an asthma episode is at even greater risk for additional asthma problems. Observe the student for asthma symptoms, and check the student's peak flow meter, if applicable. Review the student's Asthma Action Plan if there are any questions or concerns.
- ★ Monitor the environment for potential allergens and irritants; for example, a recently mowed field or refinished gym floor. If outdoor activities are planned, be sure to check ozone levels. If an allergen or irritant is present, consider a temporary change in location.
** Visit www.health.utah.gov/asthma for pollen counts, ozone levels and other air quality index (AQI) information.*
- ★ Make exercise modifications as necessary to get appropriate levels of participation. For example, if running is scheduled, the student could walk the whole distance, run part of the distance, or alternate running and walking.
- ★ Consult the student's Asthma Action Plan, parent/guardian, or health care provider regarding the type and length of any limitations. Assess the student and school resources to determine how the student can participate most fully.
- ★ Keep the student involved when any temporary, but major modification is required. Ask the student to act, for example, as a score-keeper, timer, or equipment handler until he/she can return to full participation. Dressing for physical education class and participating at any level is better than being left out or left behind.

Source: *Asthma and Physical Activity in the School. Making a Difference*, National Heart, Lung and Blood Institute, National Institutes of Health, Taken from the internet February 2004, www.nih.nhlbi.gov

Custodial Staff

Most of us spend up to 90% of our days indoors.

Avoiding environmental triggers is an important part of managing a student's asthma. Since children spend much of their time inside a school, it is important to be aware of the quality of air inside the school. The school custodial staff plays a vital role in assuring healthy indoor air quality. A healthy school environment leads to healthier, more productive students and staff. Many indoor air quality problems can be prevented or lessened by taking appropriate action. Cleaning methods and materials significantly impact the particulate and volatile organic compound levels in schools.

Each day, one in five Americans spends part of their day in a school building, most of whom are children.

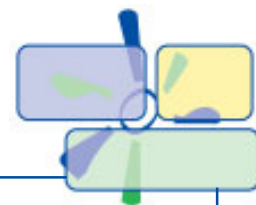
The Environmental Protection Agency had developed an indoor air quality (IAQ) *Tools for Schools* program that focuses on evaluating and maintaining a healthy school environment. This program concentrates on solving and preventing indoor air quality problems, thus decreasing the risk of exposure to students with asthma. *(Refer to the packet for additional information about EPA's Tools for Schools Program)*

Outdoor

There are also asthma triggers in the outdoor environment that can exacerbate or make a student's asthma worse. These include ozone air pollution, automobile and diesel bus exhaust, and pollen. While it is not always easy to avoid these triggers, simple steps can be taken to help reduce exposure.

- ★ Ozone levels are generally highest on hot and humid days. Therefore, reducing and/or restricting outdoor activities (particularly strenuous activities) on these days will reduce exposure to ozone.
- ★ Diesel buses should not be allowed to idle outside of the school building, since the exhaust can be drawn into the building.
- ★ Lawn mowing can increase the amount of pollen in the air, so in order to reduce exposure, lawn mowing activities should not be done prior to outdoor school activities.
- ★ Following EPA's guidelines, the Utah Asthma Task Force released guidance for school superintendents and principals for when outdoor activities (i.e. sports practice and recess) should be canceled due to outdoor air quality. *(refer to the packet for a copy of the guidance or visit the web at health.utah.gov/asthma).*

Custodial Staff



Indoor

Staff should be aware of asthma triggers found in the school environment. Common things that may induce or worsen asthma symptoms include pests (cockroaches, rats), mold from moisture in the classroom, dander from furry or feathered pets in the classroom, strong smells, perfume, cleaning solutions, paint, and/or chalk dust.

Cleaning

Carpets can be a significant source of dirt, dust mites, and mold, all of which are asthma triggers. To help reduce these, carpeted areas should be vacuumed daily. All other rooms should be vacuumed every other day with a commercial quality high efficiency particulate arresting (HEPA) filter or cleaner. All carpets should be steam cleaned once a year with truck-mounted 190 degree F steam. The carpet must be thoroughly dry within 24 hours to avoid microbial growth.

Hard Floors that are kept clean are less likely to be a source of dirt, dust mites, or other asthma triggers. Dust with static electricity or mineral oil treated mops daily, and wet mop weekly.

Bookshelves trap dust easily. All horizontal surfaces should be dusted weekly when students are not in the classroom.

Cleaning Supplies can contain chemicals that irritate students and staff with asthma. Work with a buildings maintenance supervisor to evaluate all materials that can add chemicals to the air of classrooms and replace with safer, effective alternatives when possible.

Pests, including cockroaches and mice, pesticides, and herbicides can be asthma triggers. Integrated Pest Management (IPM) can solve most pest problems. IPM is based on preventing pests by decreasing the resources (i.e. food crumbs, etc.) they need to survive, and does not involve automatic application of pesticides. When pests become a problem, alternatives to pesticides are used to reduce the pest population.

(Refer to the pocket for procedures on how to implement Integrated Pest Management).



Custodial Staff

HVAC Systems

Heating, Ventilation, and Air Conditioning

A significant percentage of indoor air problems and complaints can be attributed to the HVAC system. It has been shown that through inspection and routine maintenance, indoor air quality problems can be reduced. Common problems include blocked fresh air intakes, dirty filters, or mold buildup. The following steps will help these types of problems.

- ★ Conduct routine inspections of the HVAC system.
- ★ Clean fan blades and front grate monthly. Face fan to blow out toward the window to decrease bringing pollen and pollution into the classroom.
- ★ Do not put towels under window units to collect condensation. This is an excellent place for mold and bacteria to grow.
- ★ Clean or change window air conditioner filters every 2 weeks.
- ★ Avoid using belt-type humidifiers.
- ★ Use air conditioners or a dehumidifier to keep relative humidity in the classroom low, between 35 to 45%.

- ★ Establish a routine schedule for changing air filters.

Floors

- ★ Remove rugs if possible, and keep floors clean. Bare wood or tile floors are best.
- ★ Carpet squares trap dust. Clean them weekly. Avoid vacuuming when students are in school.

Windows

- ★ Avoid curtains. If you need a valance, choose synthetic fibers instead of natural fibers. Wash valances or curtains twice a year.
- ★ Roller shades are better than curtains. Clean with damp cloth weekly.

Classroom cleaning supplies

- ★ Some cleaning products have strong fumes. Replace caps quickly and use when the students are not in the classroom, whenever possible.

Custodial Staff



School Staff

- ★ Avoid perfumes, scented talcum powder, and hair sprays.
- ★ Smokers need to know that the smoke they bring from the smoking area lingers in their hair and on their clothes.

Use natural cleaning agents

- ★ White or apple cider vinegar removes mold, mineral deposits, and crayon marks.
- ★ Baking soda is a good general cleaner that can also be used as a room rug deodorizer or refrigerator deodorizer.
- ★ Club soda is a good spot remover.
- ★ Clorox bleach solution is a viricide, mold remover, and cleaning agent.
- ★ Use liquid rather than bar soap (mild or unscented) for hand washing.
- ★ Clean woodwork weekly with a damp cloth.

Tips for Custodians

- ★ Work with school administration and the school nurse to identify areas in the school that may contribute to indoor air pollution.
- ★ Identify barriers to maintaining good indoor air quality (IAQ). Once the barriers are identified, discuss strategies with school administration and consult with district custodial management on how to best implement the strategies.
- ★ Determine what is reasonable with regard to cleanliness and elimination of environmental pollutants in the school.
- ★ Use the Integrated Pest Management Plan.
- ★ Periodically meet with school administration to assess how good the indoor air quality is being maintained.

Source: *Chicago Public Schools*

Food Services Staff

The Link Between Food Allergies and Asthma?

While research suggests that food allergies can bring on an asthma attack, it is not a common cause of asthma. However, it is important for parents to communicate to staff so that staff members understand what the child is allergic to, how to identify the food(s), recognize symptoms, and initiate treatment, if necessary. Since an allergic reaction can occur anywhere, it is recommended that teachers, food service staff, and school nurses are aware of the children who have food allergies and that they know what to do if a reaction occurs. Anyone with a previous history of an allergic reaction to food is at risk for a repeat reaction. Avoidance is the only way to prevent an allergic reaction. In addition to food, the most common causes of severe allergic reactions include insect stings, latex and medications.

According to the Food Allergy Network, people who have food allergies and asthma are at increased risk for severe allergic reactions.

Information About Anaphylaxis

Research demonstrates that children with asthma are at a greater risk for severe allergic reactions to food. The most serious kind of allergic reaction is anaphylaxis. Anaphylaxis is a sudden, severe, and potentially fatal allergic

reaction that can involve various areas of the body. Symptoms can occur immediately or after several hours. The potential severity of a reaction is difficult to predict ahead of time so it is necessary to approach each episode of anaphylaxis as potentially life-threatening.

It is important to understand and recognize the signs of anaphylaxis. A student with an anaphylactic reaction may experience any of the following symptoms:

- ★ Itching and swelling of the lips, tongue, or mouth;
- ★ Itching and/or a sense of tightness in the throat, hoarseness, and hacking cough;
- ★ Hives, itchy rash, and/or swelling of the face or extremities;
- ★ Nausea, abdominal cramps, vomiting, and/or diarrhea;
- ★ Shortness of breath, repetitive coughing and/or wheezing;
- ★ “Thready” pulse, “Passing out.”

These eight foods account for 90% of all allergic reactions:

- ★ Egg
- ★ Fish
- ★ Milk
- ★ Peanuts
- ★ Wheat
- ★ Soy
- ★ Tree nuts (Walnuts, pecans, etc.)
- ★ Shellfish

Source: *The Food Allergy Network*

Food Services Staff



The symptoms of an allergic reaction can change suddenly and become serious and/or life threatening. Children with a history of anaphylaxis or severe allergic reaction may have an EpiPen at school as ordered by their primary care provider. The school nurse will provide EpiPen education when applicable. (Refer to your school district policy for individual cases regarding EpiPen use and training.) Notify the school nurse at the first signs of an allergic reaction. They will refer to the student's emergency care plan for appropriate treatment and for medication administration. **Call 911 and the student's parents immediately in a serious allergic reaction situation.** Also have the student's health care provider's name and telephone number available.

Tips on Nutrition for:

School Staff (Teachers/Coaches)

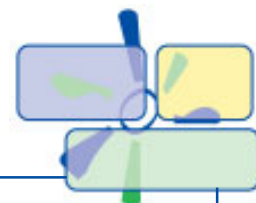
- ★ Inquire about each student's food allergies during parent-teacher conferences. Relay this information to the school nurse.
- ★ Work with the parents to protect students from life-threatening food allergy reactions.
- ★ Keep students with food allergies away from foods known to cause allergies.
- ★ Educate students in the classroom about food allergies.

School Nurse

- ★ Review all student registration forms noting any "health concerns" listed by parents which would identify food allergies, students who have asthma and other chronic illnesses and the need for medication during school hours. Share this information with the food service director and teachers who have students with these problems. Provide a copy of the child's Health Care Plan to their teacher.
- ★ Educate school personnel about food allergies and asthma, and steps they can take to prevent food allergy reactions from occurring. This in-service should include information about anaphylaxis, choking incidents, and the policy and procedure they should follow for emergency response.
- ★ Maintain communication with parent, student, and health care provider to make sure that the Asthma Action Plan is up-to-date and that it reflects any food allergies or special food needs. Keep the students' Asthma Action Plans in a readily accessible location.
- ★ Educate all staff on emergency response to asthma episodes, food-induced anaphylaxis, and EpiPen practices.

Consult the school nurse about students with food allergies.

Asthma Resources



The following organizations and websites are a sample of the national and local resources available on asthma, including information specifically for schools. This list is not an all-inclusive list.

Utah

- ★ **American Lung Association of Utah**
(801)484-4456
1-800-LUNG-USA
www.lungusa.org/utah
- ★ **Children's Health Insurance Program (CHIP)**
www.utahchip.org
- ★ **IHC Online Asthma Resource**
www.ihc.com/asthma
- ★ **Medicaid Information**
health.utah.gov/medicaid
- ★ **School Asthma Allergy Webpage of Utah**
www.schoolasthmaallergy.com/UT
- ★ **Utah QuitNet**
A free, on-line resource for quitting tobacco usage.
www.utah.quitnet.org
- ★ **Utah Collaborative Medical Home Page**
medhome.med.utah.edu

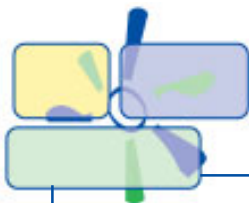
★ **Utah Department of Health**
(801)538-6101
health.utah.gov

★ **Utah Department of Health Asthma Program**
801-538-6141
health.utah.gov/asthma

★ **Utah School Nurses Association**
www.utsna.org

National

- ★ **American Lung Association**
www.lungusa.org
- ★ **Allergy and Asthma Network/Mothers of Asthmatics, Inc.**
1-800-878-4403 or
(703)641-9595
www.aanma.org
- ★ **American Academy of Allergy, Asthma, and Immunology**
1-800-822-2762
www.aaaai.org
- ★ **American Academy of Pediatrics**
1-800-433-9016 or
(847)228-5005
www.aap.org
- ★ **American College of Allergy, Asthma, and Immunology**
1-800-842-7777
www.allergy.mcg.edu



Asthma Resources

★ **Asthma Action America**
www.asthmaactionamerica.com

★ **Asthma and Allergy
Foundation of America**
1-800-2-Asthma
www.aafa.org

★ **Centers for Disease Control
and Prevention, National
Center for Environmental
Health**
www.cdc.gov/nceh/asthma

★ **Food Allergy Network**
1-(800) 929-4040
www.foodallergy.org

★ **Kids On the Block**
1-800-368-KIDS or
(410)290-9095
www.kotb.com

★ **National Association of School
Nurses**
1-877-627-6476
www.nasn.org

★ **The National Center for
Education in Maternal and
Child Health**
www.ncemch.org

★ **National Heart, Lung, and
Blood Institute/National
Asthma Education and
Prevention Program**
(301)592-8573
www.nhlbi.nih.gov

★ **National Jewish Medical and
Research Center (Lung Line)**
1-800-222-5864
www.njc.org

★ **National Parent Teacher Assoc.**
1-800-307-4PTA
www.pta.org

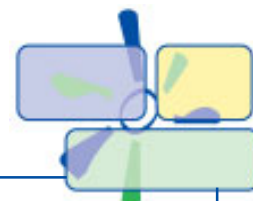
★ **National Poison Prevention
Hotline**
1-(800) 222-1222

★ **U.S. Department of Health and
Human Services**
1-877-696-6775
www.os.dhhs.gov

★ **U.S. Environmental Protection
Agency/Indoor Air Quality
Information Clearinghouse**
1-800-438-4318
www.epa.gov/iaq

** The Utah Department of Health
(UDOH) Asthma Program is not responsible
for the content of these websites. The websites
are recommendations only.*

Asthma Resources



Other Useful Asthma Websites

- ★ **www.asthmaandschools.org**
Includes information about asthma-related resources for school personnel working with grades K to 12. Includes simple, searchable database links to educational materials, medical information, websites, and other resources useful for anyone who works in a school serving children and youth.
- ★ **www.asthmaaustralia.org.au**
Provides asthma education, information, research, community advocacy, and support to people with asthma and their families.
- ★ **www.asthmainamerica.com**
Provides national and regional survey data and statistics on asthma. Lists general information on asthma, asthma management, asthma guidelines, and other resources.
- ★ **www.asthmamoms.com**
Provides extensive lists of links to asthma-related information for families, including resources about asthma triggers, medications, legislation, medical literature, statistics, initiatives, and camps. Includes information in English and Spanish, from AsthmaMoms, a network of concerned parents of children with asthma.
- ★ **www.mayoclinic.com**
Their Allergy and Asthma Center provides patient education fact sheets about asthma as well as other resource information.
- ★ **www.mchlibrary.info/documents/asthma.html**
Offers a selection of recent, high-quality resources and tools for staying abreast of new developments on asthma in children and for conducting research. Contains citations for journal articles and other print resources and links to Web sites, electronic publications, databases, and discussion groups.
- ★ **www.starbright.org**
By bringing together the fields of entertainment, technology and pediatric healthcare, STARBRIGHT creates innovative media-based programs that help seriously ill children and teens better cope with their disease - and enhance their quality of life. Free interactive CD-ROM games related to asthma are available from this site.
- ★ **schoolipm.ifas.ufl.edu/ipm_fac.htm**
Provides information and resources for parents, school administrators, school staff, and custodians on integrated pest management in schools.

Asthma Resources

Educational Resources

There are a variety of educational programs and materials available for school staff that teach students both with and without asthma about healthy behaviors, asthma management, and treatment. Many of these programs and materials are available through national organizations such as the American Lung Association (ALA), American Academy of Asthma, Allergy, and Immunology (AAAAI), or Asthma and Allergy Foundation of America (AAFA), as well as their local chapters.

Asthma Education Programs

A major component of asthma education programs is teaching students and their families greater awareness and sensitivity towards children with asthma. The following asthma education programs are just a sample of what is available for school-aged children. Each program incorporates different teaching methods and techniques for interactive learning.

Preschool Ages:

“A is for Asthma (A es para asma)”: A childhood asthma awareness project designed for childcare professionals. It includes a lively video in both English and Spanish, featuring favorite Sesame Street characters. The video and teaching information point out important messages about asthma.

Elementary School Age:

“Open Airways for Schools”: “Open Airways for Schools” is a major initiative of the American Lung Association. Currently in more than 20,000 schools nationwide, “Open Airways for Schools” is making a difference in the lives of children suffering from asthma. This curriculum was designed to teach elementary age children how to detect the warning signs of asthma, and includes steps to help prevent an asthma attack. Through group discussions, stories, games and role-play, volunteer instructors empower children to better manage their asthma. Graduates of this award-winning program have experienced fewer and less severe asthma attacks, and they are performing better academically. For more information, please call 801-484-4456 or 1-800-LUNGUSA.

Asthma Resources

Middle School and High School Ages

Power Breathing: By providing a basic understanding of asthma and its management in a peer-friendly environment, the *Power Breathing*[™] program empowers and motivates teens to take control of their asthma on a personal level.

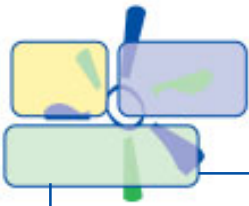
This three-session program assists teens in learning about asthma, developing decision-making skills needed to make appropriate choices in managing their asthma, and integrating asthma management into their day-to-day lifestyles. Specific fears and concerns teenagers experience in their unique social situations are addressed in a peer-friendly environment and alternative strategies are explored to achieve effective asthma management. Elements include hands-on instruction, problem-based learning, discussion, strategic thinking, video animation, and *Class Dismissed!*, a board game to test asthma knowledge.

Power Breathing conforms to the National Heart, Lung and Blood Institute's 1997 Guidelines for the Diagnosis and Management of Asthma. The cost is \$295.00. To order by phone, call Asthma and Allergy Foundation of America at 1-877-2-ASTHMA or call the national number at 1 -800-2-ASTHMA.

Order online: www.aafa.org

Not On Tobacco (N-O-T) is a state-of-the-art program specifically designed for teenagers who want to stop smoking. This program was developed by the American Lung Association, in collaboration with researchers at West Virginia University.

The N-O-T program consists of a 10-session curriculum, plus booster sessions to reinforce what the group has learned. The program is gender sensitive and emphasizes daily life management skills, such as stress management, and healthy behaviors, including nutrition and exercise. Initial results from an ongoing national evaluation show that N-O-T does help teens stop smoking or reduce the number of cigarettes they smoke, which is often the first step to quitting entirely. For more information, call the American Lung Association of Utah at 801-484-4456 or at 1-800-LUNG-USA.



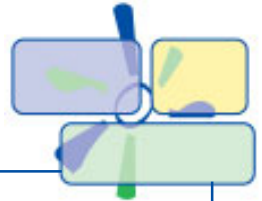
Asthma Resources

All School Ages

Utah Tobacco Quit Line: The Utah Tobacco Quit Line provides professional counseling over the telephone, mails quitting resources, and provides other services to help people quit smoking or chewing tobacco. The number is toll-free and there are no charges for these services for all Utahns. Relatives or friends can also call to learn how to help their loved ones quit using tobacco. English: 1-888-567-TRUTH (1-888-567-8788) or Spanish: 1-877-2NO-FUME (1-877-266-3863).

Utah QuitNet: Utah QuitNet is an online support program to help people quit using tobacco. It includes tools to help tobacco users create quitting plans and track progress, quitting information, peer support through message boards and email, expert advice and other services to help people quit using tobacco. These services are free to all Utahns at: www.utah.quitnet.com

Asthma Resources



Books

These books may be useful when teaching children the facts of asthma. They are meant to inform and entertain. They are also a good way of helping families share reading time together. Check for them at the community library or the local bookstore.

★ **The ABC's of Asthma: by Kim Gosselin.**

Very easy ABC book. Provides basic information about asthma. (ages 5-7)

★ **All About Asthma: by William Ostrow and Vivian Ostrow**

Written by a young boy with asthma and his mother. Talks to kids the way kids talk. A realistic book about asthma and its effects on a child. (ages 7-11)

★ **The Babysitter's Club: Welcome to the BSC, Abby: by Ann M. Martin**

#90 in the Babysitter's Club series. Abby, a new girl in town, joins the club. Trouble comes when she is rushed to the hospital with an asthma attack while babysitting. Deals with mature family subject matter and a young girl's concerns about controlling asthma. (ages 11-15)

★ **I'm Tougher Than Asthma: by Alden R. Carter and Siri M. Carter**

Written by a young girl with asthma and her mother. Includes photos of author and her family. Includes a resource section. (ages 5-10)

★ **Jackie Joyner-Kersee: Champion Athlete:**

Story of the athlete's career, including her struggle with asthma. (ages 13-17)

★ **Kids Breathe Free: A Parent's Guide for Treating Children with Asthma: Pritchett & Hull Associates, Inc.**

Written for parents, but the simple text and cartoon pictures make it a good book to share with children. Includes charts, treatment plans, and resource (Parents and Children ages 5-9)

★ **The Lion Who Had Asthma: by Jonathan London**

Written for the young child with asthma. Sean loves to pretend he is a lion, but must first cope with his asthma. Easy text and colorful pictures. (Pre-school to grade 2.)

★ **Sportercise! : by Kim Gosselin**

Justin is afraid to join his school team due to asthma. But after talking to his doctor and teachers, he takes control and goes on to win the Sportercise trophy.

Asthma Resources

★ **Taking Asthma to School: by Kim Gosselin**

Told by a child with asthma. Lively pictures. Includes the ‘Asthma Kids Quiz’ and ten tips for teachers. Great to share in class. (Teachers and Children ages 6-9)

★ **Zooallergy: by Kim Gosselin**

Story of a trip to the allergist and then a trip to the zoo. Fun is had by all as the characters identify asthma triggers. (ages 6-9)

★ **Aaron’s Awful Allergies: by T. Harrison and E. Fernandes**

When five-year old Aaron finds out he’s allergic to his dog, cat, six kittens, and two guinea pigs, he’s sad. So sad because his doctor and parents say he can’t keep his pets—they have to go! Just as you dab a tear at your eye, Aaron discovers a solution to his problem—one that may work at your house too.

★ **How Asthma Makes Me Feel: A Commemorative Book of Artwork and Essays by Young People with asthma: Sponsored by Sepracor Inc.**

(Allergy & Asthma Network Mothers of Asthmatics)
AANMA invited children throughout the United States to submit artwork and essays about living with asthma. The compelling entries are presented in this book.



When a student has asthma, it is a concern for his/her entire family. Therefore, it is helpful to have an understanding of what a family experiences when dealing with a chronic health condition. The school staff, including the school nurse can help provide support to families in managing a student. Staff can also assist families by providing educational resources and materials about asthma and organizing training workshops on asthma for the school community. Staff have the opportunity to educate families on asthma triggers in the home and can help to empower families to take charge and create a healthy environment. In Utah, there are also a number of local community-based organizations, including the American Lung Association of Utah.

Communication

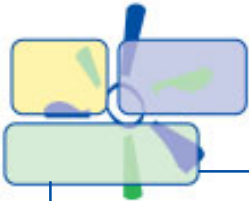
Effective communication plays a major role in helping a student manage their asthma and can help to ensure that health needs are met in a timely fashion. Open communication with the family of a student with asthma and the primary care provider is essential for successful asthma management. The Asthma Action Plan can help facilitate a relationship with the school and health care provider. *(Refer to the pocket for a sample Asthma Action Plan).*

Home Environment

Children should be protected from second-hand smoke in the home. Since children are still developing, exposure to the poisons in second-hand smoke put them at greater risk. Children may experience severe health problems, including asthma, decreased lung function, and lower respiratory tract infections. Therefore, it is important to take all the necessary steps to ensure a smoke-free home. If household members wish to quit smoking, there is support for them through the Utah Tobacco Quit Line, 1-888-576-TRUTH (1-888-567-8788), in English or 1-877-2-NO-FUME (1-877-266-3863).

Things parents can do to help their school raise awareness about asthma:

- ★ Volunteer to help your school provide in-service programs and educational resources on asthma and other health-related issues.
- ★ Contact your school nurse about your child's needs.
- ★ Call the American Lung Association of Utah at 1-800-LUNG-USA or 801-484-4456 for additional information.
- ★ Encourage the PTA or PTO to get involved in asthma-related initiatives.



Family

- ★ Sponsor asthma-related events or fairs at the school to help raise awareness for the community.
- ★ Support, sponsor, and/or participate in support groups for children and/or families with asthma.
- ★ Support/volunteer for the “Open Airways” program. *(Refer to the pocket for additional program information and a contact telephone number.)*

Glossary of Terms



Allergen: A foreign substance that leads to an allergic reaction. Examples are dust, molds, and pollens.

Allergic asthma: Asthma attacks or flare-ups that are caused by an allergic reaction.

Allergic conjunctivitis: Sometimes called “pink eye”, allergic conjunctivitis is one of the most common and treatable eye conditions in children and adults. Allergic conjunctivitis is an inflammation of the conjunctiva, the tissue that lines the inside of the eyelid and helps keep the eyelid and eyeball moist.

Allergic Reaction: An acquired abnormal immune response to a substance (allergen) that does not normally cause a reaction.

Allergic rhinitis: Allergic rhinitis, sometimes called “hay fever,” is an inflammation of the nasal passages that is caused by an allergic reaction. Allergic rhinitis can affect the nose, sinuses or bronchial tubes.

Allergist: A doctor who specializes in diagnosing and treating allergies.

Alveoli: Tiny air sacs located at the end of the airway tubes.

Anaphylaxis/anaphylactic reaction: A sudden allergic reaction that can be deadly. It is characterized by swelling of the tongue and throat, difficulty breathing, and low blood pressure.

Anti-inflammatory Medication: A medicine that reduces the symptoms caused by swelling of the airways. It helps control asthma over the long term. Corticosteroids are an example of anti-inflammatory medications.

Antihistamines: A medicine (or chemical) which blocks or counteracts the physiological action of histamine. The release of histamines is usually what causes asthma symptoms such as sneezing, coughing, and wheezing.

Asthma: A chronic disease caused by inflammation that affects the airways in the lungs resulting in difficulty with breathing. Asthma attacks are set off by allergens, infections, exercise, cold air or other factors.

Asthma Action Plan (Health Care Plan): A set of specific instructions for a person with asthma. The zones tell how to keep asthma under control, depending on how someone is feeling.

Glossary of Terms

Atopic dermatitis: One type of exzema that comes and goes repeatedly, and usually occurs in people who have inherited tendency to have allergies. In about 70 percent of cases, either the patient or a family member has allergic asthma, hay fever, or food allergies.

Atopic eczema appears early in life, usually in babies between 2 months and 18 months old. In babies, atopic exzema primarily affects the face, neck, ears and torso. It also appears on the tops of feet or the outside surface of elbows. Atopic eczema also is seen in older children, teen-agers and adults, where it usually involves the skin inside the creases of the inward bend of the elbow, knee, ankle, or wrist joints, the hands, or the upper eyelids.

Bronchial Tubes: The two tubes that branch off the airway (trachea) and carry air into the lungs.

Bronchoconstriction or Bronchospasm: Tightening of the airways, such as during an asthma attack, decreasing the amount of air moving into the lungs.

Bronchitis: An inflammation of the lining of the bronchial tubes, the hollow air passages that connect the lungs to the windpipe (trachea). The inflammation can be caused by infection or by other factors that irritate the airways, such as cigarette smoking, allergies and exposure to fumes from some chemicals.

Bronchodilator Medications: A group of drugs that widen the airways in the lungs, providing quick relief. These are known as “rescue” medications.

Contact dermatitis: A form of skin inflammation that occurs because the skin has been exposed to a substance that irritates it or that causes an allergic reaction.

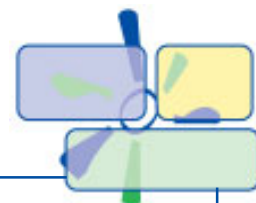
Controller Medications: These medications work over the long term to treat inflammed airways affected by asthma, thus reducing the risk of an asthma attack.

Corticosteroid drugs: A group of anti-inflammatory drugs that reduce the swelling of the airways.

Croup: A spasmodic swelling of the airway, especially of infants marked by episodes of difficult breathing, stridor (a high pitched noise upon breathing in), and a hoarse grating cough.

Dander: Small scales from animal skin. This is a common allergen.

Epinephrine/Epi Kit/EpiPen: a chemical which acts as a muscle relaxant in bronchial tubes, and is often used during a life-threatening asthma attack. Also called adrenaline.



Glossary of Terms

Exercise-Induced-Asthma: An asthma attack or flare-up that is caused by exercise.

Hay fever: An acute allergic rhinitis and conjunctivitis that is sometimes accompanied by asthmatic symptoms.

Health Care Plan (Asthma Action Plan): A set of specific instructions for a person with asthma. The zones tell how to keep asthma under control, depending on how someone is feeling.

Immune System: The system within the body that locates harmful foreign substances and works to get rid of them before they make you sick.

Immunologist: A specialist in immunology, which is the science that deals with the immune system, the body's ability to fight disease and the body's immune responses.

Immunotherapy: Treatment of, or prevention against, disease by attempting to produce active or passive immunity.

Inflammation: Redness and swelling in a body tissue such as the nose, lung or skin due to chemical or physical injury, infection, or exposure to an allergen.

Inhaled Steroids: Medicines that prevent asthma symptoms if taken regularly at adequate doses. The medicine is taken via inhaler only.

Inhaler: A device that delivers medications in a fine mist that is inhaled by breathing deeply.

Latex allergy: An allergic response (swollen eyes, rash, sneezing, asthma attack, etc. . .) that is caused by contact with latex (often contained in balloons, rubber gloves, etc).

Nebulizer: A machine that pumps air through a liquid medicine making the medicine bubble until a fine mist is formed that is breathed in. It is usually used in the hospital or at the health care provider's office.

Peak Flow Meter: A small tube-like handheld device used to measure the speed at which a person can push air out of their lungs. Monitoring peak flow can tell how well asthma is being controlled even before symptoms appear.

Pollen: A fine dust type material contained in a seed plant that may cause an allergic response when a person is exposed to it.

Pulmonologist: A specialist in lung conditions and diseases.

Quick-Relief Medication: Medications that can quickly relieve symptoms and restore normal breathing. They do nothing to prevent future asthma flare-ups.

Glossary of Terms

Reactive airway disease: A general term used when a patient is having trouble breathing or wheezing and yet may not have a formal diagnosis of asthma. Often used as a diagnosis when the clinician is uncertain if the symptoms are true asthma symptoms.

Relief (Rescue) Medications: Short-term medications that provide quick relief to the airways during an asthma attack.

Respiratory System: The group of organs responsible for breathing. This includes the nose, throat, airways, and the lungs.

Retractions: Occurs during a more severe asthma attack. You can see the chest sucking in below the ribs or below the neck when you inhale.

Seasonal allergies: Allergies or allergic symptoms (sneezing, coughing, runny nose and eyes, asthma attacks) that occur during specific seasons.

Sinusitis: Inflammation of the sinus cavities.

Spacer: A device that attaches to an inhaler that helps direct the medication into the lungs. These are useful for very young children who have trouble getting enough medicine into their lungs with an inhaler alone.

Stridor: A harsh vibrating sound heard during respiration when the airway has some obstruction, such as during an asthma attack when the airway is swollen.

Symptoms: Physical changes or feelings that show a disease or condition exists. For asthma these may be coughing, wheezing, breathing difficulty, or a tightness in the chest.

Triggers: Activities, conditions, or substances that cause the airways to react and asthma symptoms to occur. Some examples of possible asthma triggers are dust mites, mold, changes in temperature, tobacco smoke, and furry pets. Triggers are different for each person.

Urticaria: Another word for “hives”, or swollen areas of skin due to an allergic response.

Wheeze: A whistling sound that occurs when a person is having difficulty breathing in or out, such as during an asthma attack.